

WHAT IS CLAIMED IS:

1. An image formation apparatus comprising:
  - a transport unit that transports a record medium;
  - a print head having a plurality of nozzles that eject ink, thereby forming an image on the record medium;
  - a first recovery ejection unit that performs recovery ejection of nozzles used for forming an image on the record medium; and
  - a second recovery ejection unit that performs recovery ejection of at least one of the plurality of nozzles in accordance with a time elapsed from a previous recovery ejection.
2. The image formation apparatus as claimed in claim 1, wherein the second recovery ejection unit performs the recovery ejection in a larger ejection amount than the ejection amount of the first recovery ejection unit.
3. The image formation apparatus as claimed in claim 1, wherein the transport unit includes a transport belt that transports the record medium; and the second recovery ejection unit performs recovery ejection of nozzles at a predetermined position on the transport belt.
4. The image formation apparatus as claimed in claim 3,

wherein the transport belt has a recess that receives ink ejected to the belt at the predetermined position.

5. The image formation apparatus as claimed in claim 1,  
5 further comprising: a cleaning unit that cleans ink ejected  
by the second recovery ejection unit.

6. The image formation apparatus as claimed in claim 1,  
further comprising: a time count unit that counts a predetermined  
10 time;

wherein the second recovery ejection unit performs the recovery ejection each time the predetermined time counted by the time count unit has elapsed.

15 7. The image formation apparatus as claimed in claim 1,  
further comprising: a temperature detection unit that detects  
an ambient temperature;

wherein the second recovery ejection unit changes the time in response to the temperature detected by the temperature  
20 detection unit.

8. The image formation apparatus as claimed in claim 1,  
further comprising: a humidity detection unit that detects an ambient humidity;

25 wherein the second recovery ejection unit changes the

time in response to the humidity detected by the humidity detection unit.

9. The image formation apparatus as claimed in claim 1,  
5 further comprising:

a temperature detection unit that detects an ambient temperature;

wherein the second recovery ejection unit changes ejection amount of ink in response to the temperature detected  
10 by the temperature detection unit.

10. The image formation apparatus as claimed in claim 1,  
further comprising:

a humidity detection unit that detects an ambient  
15 humidity;

wherein the second recovery ejection unit changes ejection amount of ink in response to the humidity detected by the humidity detection unit.

20 11. A recovery ejection method in an image formation apparatus including a transport unit for transporting a record medium and a print head having a plurality of nozzles for ejecting ink for forming an image, the method comprising:

25 performing a first recovery ejection of nozzles used for forming an image on the record medium; and

performing a second recovery ejection of at least one of the plurality of nozzles in accordance with a time elapsed from a previous recovery ejection.

5 12. The recovery ejection method claimed in claim 11, wherein the step of performing second recovery ejection includes performing recovery ejection in a larger ejection amount than the ejection amount of the first recovery ejection.

10 13. The recovery ejection method as claimed in claim 11, wherein the step of performing second recovery ejection includes performing recovery ejection of nozzles at a predetermined position on a transport belt included in the transport unit.

15 14. The recovery ejection method as claimed in claim 11, wherein the step of second recovery ejection includes ejecting ink each time a predetermined time has elapsed.

20 15. The recovery ejection method as claimed in claim 11, wherein the step of second recovery ejection includes changing the time in response to an ambient temperature.

25 16. The recovery ejection method as claimed in claim 11, wherein the step of second recovery ejection includes

changing the time in response to an ambient humidity.

17. The recovery ejection method as claimed claim 11,  
wherein the step of second recovery ejection includes  
5 changing ejection amount of ink in response to an ambient  
temperature.

18. The recovery ejection method as claimed claim 11,  
wherein the step of second recovery ejection includes  
10 changing ejection amount of ink in response to an ambient  
humidity.

19. An image formation apparatus comprising:  
a transport belt that transports a record medium in a  
15 transporting direction and includes a surface having a recess  
extending in a predetermined direction that crosses the  
transporting direction;  
a print head having a plurality of nozzles that ejects  
ink on the record medium;  
20 a maintenance unit movable between a first position and  
a second position, the maintenance unit positioned at the first  
position while the nozzle is not ejecting the ink and at the  
second position while the nozzle is ejecting the ink, the first  
position being between the print head and the transport belt,  
25 the second position positioning in the predetermined direction

with respect to the first position; and

a controller configured to control driving of the transport belt and the print head and to perform a recovery ejection operation of the nozzles of the print head;

5 wherein the controller controls the transport belt and the print head so that the ink is ejected onto the recess while performing the recovery ejection operation; and

the maintenance unit includes a cleaning portion that cleans the recess when the maintenance unit moves between the  
10 first position and the second position.

20. The image formation apparatus as claimed in claim 19,

wherein the cleaning portion is disposed in the recess when the maintenance unit is positioned in the first position;

15 and

the cleaning portion moves within the recess in the predetermined direction when the maintenance unit moves between the first position and the second position.

20 21. The image formation apparatus as claimed in claim 19,

wherein the recess extends to a side edge of the transfer belt.

22. The image formation apparatus as claimed in claim 19,

25 wherein the cleaning portion is disposed at a position

that faces to the transport belt when the maintenance unit is at the first position.

23. The image formation apparatus as claimed in claim 19,

5 wherein the cleaning portion includes a wiper that wipes the recess.